

Figure 1

<i>GLP-1 (7-37)</i>			
HAEGTFTSDV	SSYLEGQAAK	EFIAWLVKGR	G-NH ₂
<i>Exendin-3</i>			
HSDGTTFTSDL	SKQMEEEAVR	LFIIEWLKNGG	PSSGAPPSS-NH ₂
<i>Exendin-4</i>			
HGEGTFTSDL	SKQMEEEAVR	LFIIEWLKNGG	PSSGAPPSS-NH ₂
<i>Exendin[9-39]</i>			
DL	SKQMEEEAVR	LFIIEWLKNGG	PSSGAPPSS-NH ₂

FIGURE 2

Gastric emptying with exendins

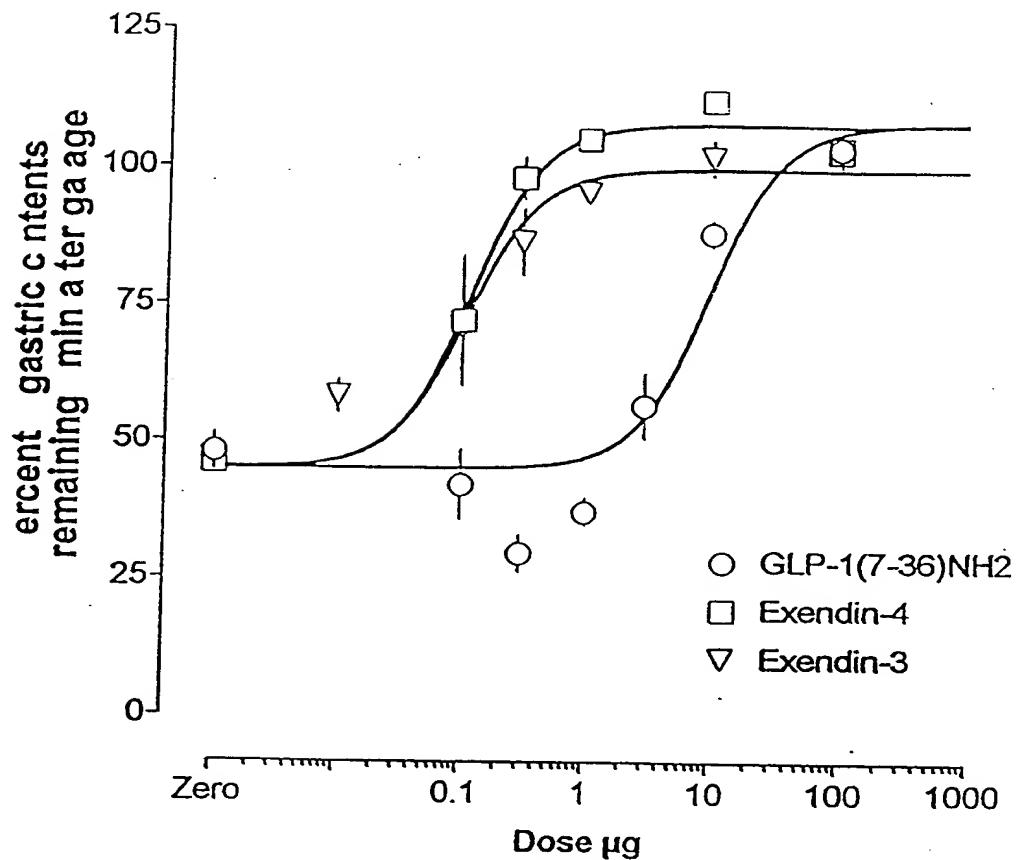


Figure 3

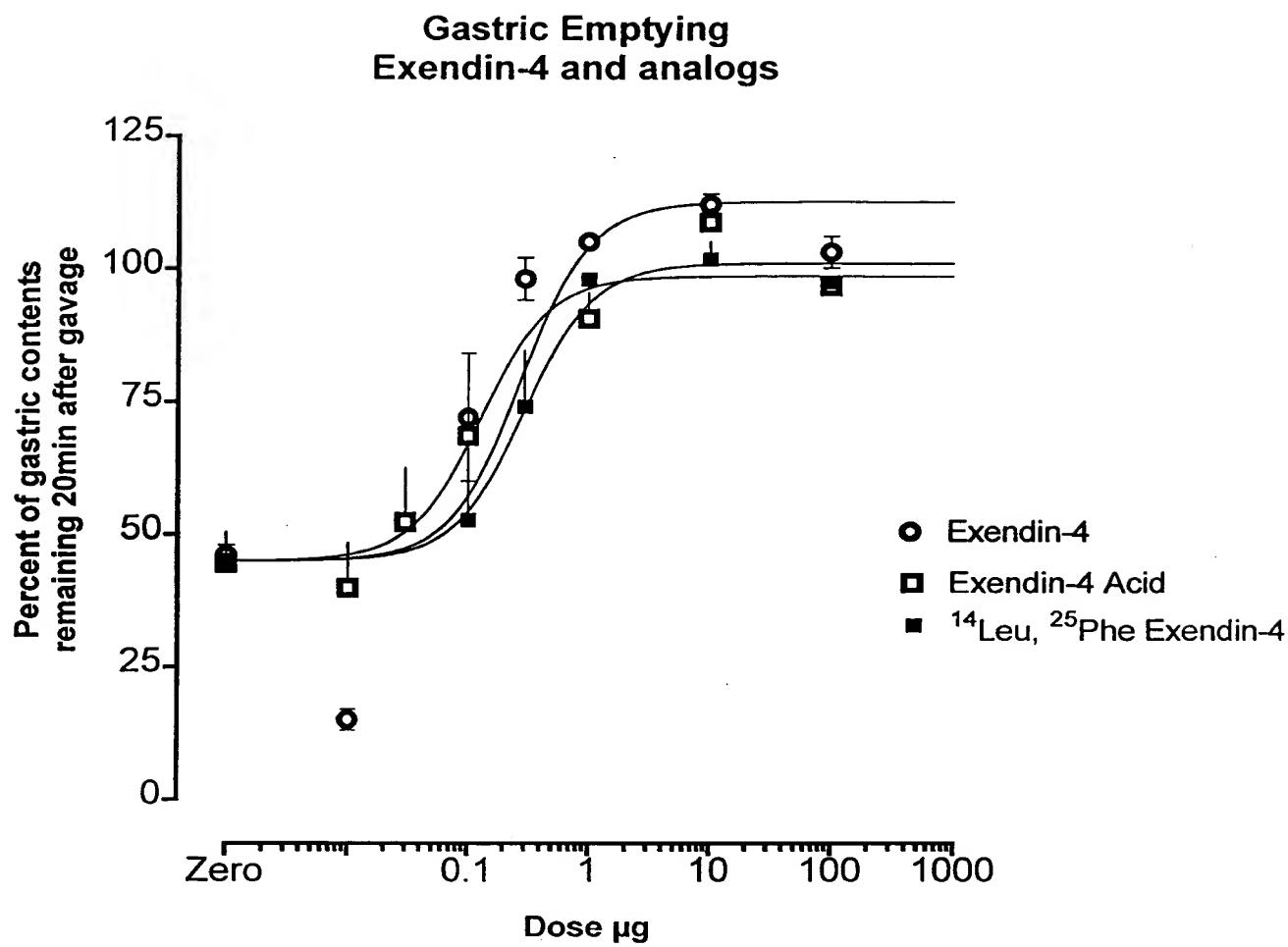


Figure 4

**Exendin 9-39 given sc did not
antagonize the effect of Exendin-4 on
gastric emptying**

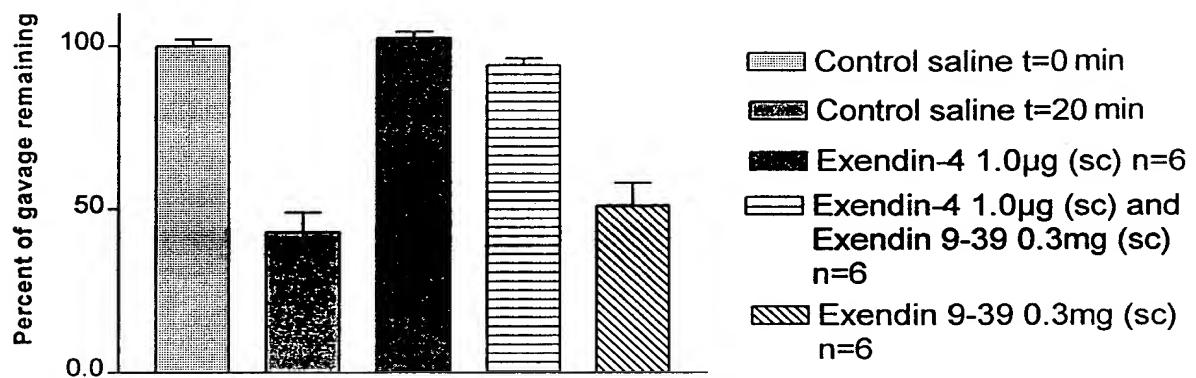


Figure 5

**Exendin 9-39 given iv did not antagonize
the effect of Exendin-4 on gastric
emptying**

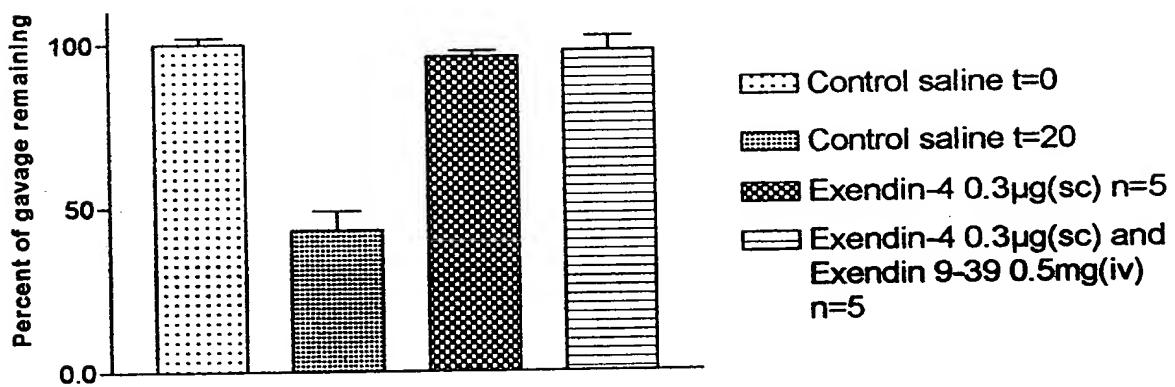


Figure 6

Exendin 9-39 given sc did not antagonize the effect of GLP-1 on gastric emptying

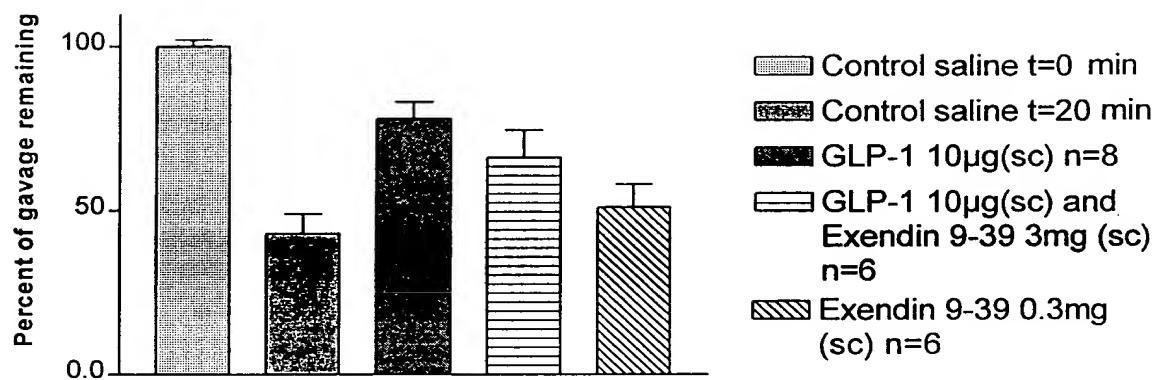
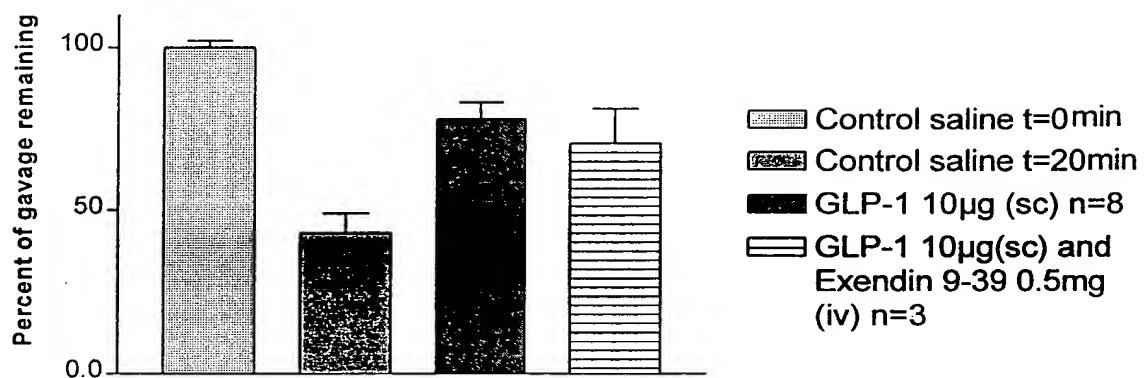


Figure 7

Exendin 9-39 given iv did not antagonize the effect of GLP-1 on gastric emptying



1 Xaa₁ Xaa₂ Xaa₃ Gly Thr Xaa₄ Xaa₅ Xaa₆ Xaa₇ Xaa₈ Xaa₉ Xaa₁₀ Xaa₁₁ Xaa₁₂ Xaa₁₃ Leu Lys Asn Gly Gly Xaa₁₄ Ser Ser Gly Ala Xaa₁₅ Xaa₁₆ Xaa₁₇ Xaa₁₈-Z
 5 10 15 20 25 30 35
 20 Xaa₁ Xaa₂ Xaa₃ Xaa₄ Xaa₅ Xaa₆ Xaa₇ Xaa₈ Xaa₉ Xaa₁₀ Xaa₁₁ Xaa₁₂ Xaa₁₃ Xaa₁₄ Xaa₁₅ Xaa₁₆ Xaa₁₇ Xaa₁₈
 25

Compound (S20, Id. No.)	Xaa ₁	Xaa ₂	Xaa ₃	Xaa ₄	Xaa ₅	Xaa ₆	Xaa ₇	Xaa ₈	Xaa ₉	Xaa ₁₀	Xaa ₁₁	Xaa ₁₂	Xaa ₁₃	Xaa ₁₄	Xaa ₁₅	Xaa ₁₆	Xaa ₁₇	Xaa ₁₈	2
1 [5]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Phe	Pro	Pro	Pro	Pro	Pro	NH ₂
2 [6]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	Ser
3 [7]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Phe	Pro	Pro	Pro	Pro	Pro	NH ₂
4 [8]	Tyr	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
5 [9]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	Tyr
6 [10]	His	Gly	Asp	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
7 [11]	His	Gly	Glu	Naph	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
8 [12]	His	Gly	Glu	Phe	Ser	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
9 [13]	His	Gly	Glu	Phe	Ser	Thr	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
10 [14]	His	Gly	Glu	Phe	Thr	Thr	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
11 [15]	His	Gly	Glu	Phe	Thr	Ser	Glu	Leu	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
12 [16]	His	Gly	Glu	Phe	Thr	Ser	Asp	Poly	Met	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂
13 [17]	His	Gly	Glu	Phe	Thr	Ser	Asp	Poly	Leu	Phe	Ile	Glu	Phe	Pro	Pro	Pro	Pro	Pro	NH ₂
14 [18]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Poly	Phe	Ile	Glu	Trp	Pro	Pro	Pro	Pro	Pro	NH ₂

FIGURE 8-2

Compound (SEQ. ID. No. 1)	Xaa ₁	Xaa ₂	Xaa ₃	Xaa ₄	Xaa ₅	Xaa ₆	Xaa ₇	Xaa ₈	Xaa ₉	Xaa ₁₀	Xaa ₁₁	Xaa ₁₂	Xaa ₁₃	Xaa ₁₄	Xaa ₁₅	Xaa ₁₆	Xaa ₁₇	Z
15 [19]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	pGly	Phe	Ile	Glu	Phe	Pro	Pro	Pro	Pro	NH ₂
16 [20]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	naph	Ile	Glu	Trp	Pro	Pro	Pro	Pro	NH ₂
17 [21]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Val	Glu	Trp	Pro	Pro	Pro	Pro	NH ₂
18 [22]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Val	Glu	Phe	Pro	Pro	Pro	Pro	NH ₂
19 [23]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	cBuG	Glu	Trp	Pro	Pro	Pro	Pro	NH ₂
20 [24]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	cBuG	Glu	Phe	Pro	Pro	Pro	Pro	NH ₂
21 [25]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Asp	Trp	Pro	Pro	Pro	Pro	NH ₂
22 [26]	His	Ala	Leu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Phe	Pro	Pro	Pro	Pro	NH ₂
23 [27]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	tPro	tPro	tPro	tPro	NH ₂
24 [28]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	tPro	tPro	tPro	NH ₂
25 [29]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	hPro	hPro	hPro	hPro	NH ₂
26 [30]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	hPro	hPro	hPro	NH ₂
27 [31]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Phe	tPro	tPro	tPro	tPro	NH ₂
28 [32]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Phe	hPro	hPro	hPro	hPro	NH ₂
29 [33]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	MeAla	MeAla	MeAla	MeAla	NH ₂
30 [34]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Met	Phe	Ile	Glu	Trp	Pro	MeAla	MeAla	MeAla	NH ₂
31 [35]	His	Gly	Glu	Phe	Thr	Ser	Asp	Leu	Leu	Phe	Ile	Glu	Phe	MeAla	MeAla	MeAla	MeAla	NH ₂